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ABSTRACT

A study at the United States Air Force Academy examined reasons for "survey saturation" among students. Despite relatively high return rates, anecdotal student data suggested that students felt burdened by frequent administration of surveys; and administrators expressed concerns about the general validity of survey data. Information was gathered on students' views of an optimal survey, their concerns about confidentiality and the use of electronic surveys, and student motivation and survey participation. Written comments gave insights into issues emphasized by students and provided evidence that survey responses impact upon policy decisions. The survey data provided clear empirical support for students' feelings of being over-surveyed and the resulting negative impact on survey validity. Findings from the report suggest consideration of important guidelines for future survey design and administration. (Contains 8 references.) (CH)

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Undergraduate Perceptions of Survey Participation: Improving Response Rates and Validity[1]

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for Management Research, Policy Analysis, and Planning

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This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of AIR Forum Papers.

Dolores Vura
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Abstract

The institution supports a decentralized assessment program. Data are typically collected via attitude and opinion surveys. Despite relatively high return rates, anecdotal student data suggested that students felt burdened by frequent survey administrations and did not always perceive that survey participation was voluntary (even though a voluntary participation statement appears at the beginning of USAFA surveys). Further, administrators expressed concerns about these perceptions as well as the general validity of USAFA student survey data. The objective of the current research was to gain a thorough understanding of this apparent "survey saturation." Desired survey completion times, annual administration frequency, and survey length suggestions were obtained. Written comments provided insight into issues emphasized by students and evidence that survey responses have impacted policy decisions. Respondents also suggested remedies that can be used to address student concerns regarding the confidentiality of electronic survey responses. Suggested guidelines for improving response rates and data validity are described and future research areas are discussed.

Undergraduate Perceptions of Survey Participation: Improving Response Rates and Validity

The current public, accreditation, and legislative mandates for accountability and effectiveness have profoundly impacted higher education (Cameron & Smart, 1998; Darling-Hammond, 1994). Like many post-secondary institutions, the United States Air Force Academy (USAFA) has become increasingly active in the assessment of educational, institutional, student support, athletic, and military training outcomes. Not surprisingly, a significant increase in the number of data collection initiatives has been observed recently, usually in the form of student attitude and opinion surveys. Hence, herein lies the dilemma: leaders need survey data for decision-making purposes, but USAFA students (cadets) rarely agree with or understand the relevance of requests for such data.

Student response to USAFA's burgeoning survey effort can be characterized as mixed as can the students' motivation toward survey participation. In one sense, the Academy's military training environment tends to foster participation based upon a "sense of duty." Conversely, this same environment may not ensure sincere or "accurate" student responses for a variety of reasons, for example, respondents do not always receive timely survey feedback regarding the impact of their participation. From a perspective external to the cadets, recommended survey research practices (e.g., advance notification, observable management support) have been consistently implemented by the Academy's Survey Program (Cook & Campbell, 1979; Fink & Kosecoff, 1985; Fowler, 1995; Oppenheim, 1992; Robinson, Shaver, & Wrightsman, 1991; Rossi, Wright, & Anderson, 1983).[2]

[2]Among others, other practices include: providing advanced notice/publicity to respondents and their advisors, reserving survey participation time so do not expend their personal time, ensuring that senior leadership provides evidence of their sponsorship, sending follow up emails, and encouraging feedback to survey respondents.

Over time, informal discussions with students and recent graduates, focus group feedback, and responses to open-ended survey items suggested that USAFA faced a challenge. Despite the enviable 60% - 80% response rates for the major institutional surveys, this anecdotal data highlighted factors that could potentially impact the validity of the survey data: student resentment toward questions focused on sensitive issues, distrust regarding assurances of response confidentiality or anonymity, resentment toward the time required by survey participation, and a lack of evidence about how student input had been used to improve student life. Furthermore, this informal data highlighted practices that could be employed to positively impact the intrinsic willingness of students toward survey participation.[3]

Generally, the issue can be conceptualized as the students feeling "over-surveyed" or burdened by frequent requests for survey participation. To better understand and refine the scope of this apparent problem, data were collected from those most impacted by the proliferation of USAFA surveys: the students themselves. Ironically, the data collection method was a survey about surveys. The primary research questions were:

(a) Do the students (cadets) feel "over-surveyed?"

(b) How do students define the term "over-surveyed?"

(c) What changes could be made to the current survey design and administration approach that might result in reduced response burden and higher response rates?

(d) How do students view response confidentiality/anonymity when electronic survey forms are used?

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[3]These practices include: developing more comprehensive efforts toward relating survey topics to the participants' daily lives, thoroughly explaining the survey's purpose and use of the data, communicating program and policy changes based upon survey data in a timely manner, minimizing survey complexity and length, and emphasizing the confidentiality or anonymity of survey responses.

Method

Instrument Development

Two student focus groups were conducted to clarify issues and to guide survey design efforts. Students were asked to define the term "over-surveyed" and to identify factors that contributed to their survey participation decision. Participants indicated their preferences regarding the optimal number of questions and time required to complete a survey. Moreover, the participants discussed their confidentiality/anonymity concerns in relation to electronic survey forms and suggested ways in which assurances of confidentiality would be most effectively implemented.

The final instrument consisted of 10 forced- and one multiple-choice items.[4] In addition, eight open-ended items asked students to describe factors that contributed to feeling "over-surveyed" and to further describe their preferences in terms of survey length and the time required to complete surveys. Other topics included the efficacy of offering rewards for participation and enhancing student confidence in the overall confidentiality of the data gathered via electronic means. Finally, a list of surveys administered during the previous year was developed. For each survey, respondents were asked to indicate whether they had completed the survey and to rate their perceived relevance and importance. Survey results for this list relate to specific Air Force Academy assessment activities and initiatives. Hence, the results are not included or discussed given the purpose of the current report.

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[4]The forced-choice items required students to: indicate whether they felt over-surveyed; describe their view of an optimal survey (number of items and time required to complete the survey); specify the minimum of surveys that should be administered during an academic year; identify their preferred survey completion time (officially scheduled time versus personal time; describe their concerns regarding the confidentiality of electronic surveys; indicate their willingness to serve as a reviewer for upcoming student surveys. The multiple-choice question asked respondents to indicate their reasons for participating or not participating in USAFA survey efforts.

Participants

Six student squadrons were randomly selected from the total population of 40 squadrons. Approximately 100 students (or cadets) comprise a squadron. All students are randomly assigned to squadrons and all squadrons are housed in a dormitory setting. In essence, the squadron serves as the focus of student life. Previous USAFA analyses have consistently demonstrated the absence of differences in terms of aptitude and demographic factors such as gender and ethnic status. Hence, the squadron served as the unit of analysis during the process of randomly selecting the six squadrons.

Procedure

Students from the six squadrons completed the survey in their dormitory rooms via a local area network. A single 50-minute class period was specifically reserved for this major survey administration. The remaining 34 squadrons were randomly assigned to complete one of three paper or electronic surveys (which were not related to the current study). This administration approach was aimed toward minimizing the response burden, i.e., each student completes only one survey instead of four. Previous USAFA experience has shown that administration efficiency is achieved and response rates are enhanced by administering four surveys during a reserved time slot.

Prior to the survey administration period, all students received a "motivational" e-mail message from USAFA's senior leadership asking for their support. All messages were tailored to the specific survey to be completed by a given squadron. Generally, each message included a description of the survey objectives and how the resulting data would be used. Further, respondent were told when and how they could access aggregate survey feedback. This message stressed the voluntary nature of survey participation and described the measures enacted to

ensure response confidentiality. Respondents were told that the *RAOSOFT®* program used to create the electronic survey automatically encrypted their data. Furthermore, the e-mail emphasized the "Academy's trusted agent" function played by the USAFA Office of Institutional Research and Assessment and the security procedures that were in place to enhance the confidentiality of survey responses.

Results

Demographics

Of 590 potential participants, 360 students voluntarily completed the survey for a 61% response rate. Of the 360, the proportion of respondents for each class year (freshman, sophomore, junior, senior) was 30.3%, 27.7%, 23.3%, and 18.7% respectively. The gender of the respondents (17% female and 83% male) mirrored the proportions found in the squadrons and in the overall student enrollment.

Do Students Feel "Oversurveyed?"

Ninety-seven percent of the respondents reported feeling at least somewhat "over-surveyed." Nearly half (48%) chose "Yes, definitely." Of those, sophomores endorsed this response most often (62%) while freshmen were least likely to report feeling over-surveyed (8%). Twenty-five percent of the respondents chose the more moderate option "Yes, I feel over-surveyed, but I realize that the survey data are valuable." Seniors were most likely to choose this response (37%). Other responses included "Somewhat" (13.5%) and "Somewhat, but I realize survey data are valuable" (10.7%).

Student Perspectives: What "Oversurveying" Means

Respondents were asked to define the term "over-surveyed" via an open-ended question. Not surprisingly, the most frequent definition offered was: "Too many surveys." However, the

overall content analysis suggests a more complex definition: the combination of frequent surveys that are perceived as irrelevant to daily student (cadet) life ("Too many surveys about nothing pertinent."). Furthermore, many respondents were very clear about the impact of frequent surveys perceived as irrelevant by students: "Too many surveys are given and this number causes survey takers to care less and less about their response because of the monotony." Respondents described a combination of other factors that impacted their definition of the term "over-surveyed": perceived lack of stated purpose, failing to provide feedback to participants, too many surveys that focus on every minute aspect of the students' lives, and reduced personal time already strained by rigorous academy and military training requirements.

Students' View of the Optimal Survey

Given these factors, the implementation of measures designed to ameliorate the impact of feeling "over-surveyed" becomes critical. Depending upon the circumstances, reducing the response burden could potentially result in higher response rates and increased data validity. Previous analyses, as well as the results of the current survey, highlighted the validity issues that arise when students bubble in a tree on the answer sheet ("christmas-treeing") or mark the same option regardless of the question. According to the respondents, on average, a survey should consist of 22 items and require 13 minutes or less to complete. Further, respondents indicated that surveys should be administered only three to four times per school year. For the current survey, the overall completion time was 12.5 minutes. "Make it simple and quick and people will respond and respond honestly."

When asked about when they prefer to complete surveys, 83% preferred a designated time rather than their personal time (6%). "We have limited personal time as it is; when the time is set aside, it is easier to complete it." "If I have a time set aside, I cannot put it off and then

eventually decide to not do it." Eleven percent did not indicate a preference. Freshmen were more likely to request a designated time (91%). Juniors and seniors were more likely to choose personal time (10% and 12% respectively).

Student Confidentiality Concerns and Electronic Surveys

More than one-third of the respondents indicated that they were "concerned" (21%) or "somewhat concerned" (18%) about the confidentiality of their electronic survey responses. Seniors (concerned = 27%; somewhat concerned = 21%) and women (concerned = 22%; somewhat concerned = 26%) were more likely to express confidentiality concerns. Four percent of all respondents indicated that they knew of an instance in which students were identified based on their survey responses. Both seniors (11%) and women (10%) were more likely to report knowledge of such an incident.

USAFA surveys are increasingly electronic in format. When asked about suggestions for effectively communicating the safeguards used to ensure respondent confidentiality, the most frequent input was "Tell us." Interestingly, these safeguards are described in nearly every USAFA survey, so these comments suggest that some students may not thoroughly review survey instructions. A number of students did recognize that they had already been informed of the safeguards in the current survey. Other suggestions included: demonstrating the efficacy of the survey software's data encryption algorithm, sending an e-mail to all surveys describing the safeguards, avoid asking for a student's username and password, explaining the confidentiality enhancements at the beginning of the survey, and placing a description of the enhancements on a separate screen before the survey begins.

Student Motivation and Survey Participation

When asked about their perspective on survey participation as an Air Force member, 41%

of the respondents indicated that they felt a sense of duty toward providing data to their leadership. Conversely, 23% indicated that they were not interested in completing ANY survey. Women (50%) and freshmen (49%) were more likely to feel a sense of duty. Sophomores (32%) were least likely to feel a sense of duty in relation to survey participation. Reflecting a moderate perspective, 32% reported that they understood the need for survey data, but that they were not interested in providing such data. Given the hectic pace of student life at USAFA, it is not surprising that 47% of the respondents indicated that they view surveys as "one more thing that I have to do." When comparing seniors to freshman, this perspective is even more pronounced. Seniors (52%) endorsed this option more often when than freshmen (42%).[5] However, while surveys are typically viewed as one more request for student time, respondents indicated that they understood the value and purpose of surveys. "I feel they are necessary, but at the same time, I feel so loaded down at times. Surveys take too much valuable time."

When asked if cadets should receive privileges for their survey participation, 41% responded "Yes, more cadets would respond to surveys" while 54% said "No" and 5% described an "Other" alternative. Seniors (22%) were least likely to agree with the use of privileges. "If cadets were offered privileges (e.g., sleeping in, weekend passes), the survey data would subsequently become less accurate because people would hurry through in order to receive the privilege." Conversely, sophomores (55%) were most likely to endorse the use of privileges to encourage participation. Privileges most often suggested were sleeping in and disbursing more weekend and day passes for off-base activities. "I think that privileges would encourage cadets to take them more seriously."

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[5]Respondents could select more than one answer for this question; hence, the total exceeds 100%.

Finally, 25% of the respondents indicated a willingness to serve as a student survey reviewer prior to the administration of a given survey. Another 42% indicated a willingness but felt too busy to serve in this role. Overall, over two-thirds (67%) expressed an interest toward involvement in survey development.

Discussion

The survey data provides clear empirical support for the anecdotal data discussed previously. A large majority of the respondents felt over-surveyed and many respondents clearly noted the relationship between "too many surveys" and the resulting negative impact on the validity of survey results. Also, the definition of the term "over-surveyed" was not as straightforward as one might suspect. The frequency of survey administrations during an academic year is a major contributor. Further, the qualitative data suggests that other factors interact with frequency to varying degrees. These factors include the time required to complete surveys, survey length, a clear statement of the survey's purpose, lack of timely feedback to respondents, and lack of perceived relevance to the students' lives.

On an encouraging note, at least half of the respondents reported a moderate position (ranging from "Yes, but I realize that the data are valuable" and "Somewhat" to "Somewhat, but I realize the survey data are valuable."). Even so, the first challenge is to convince the remaining two-thirds that survey data are an important part of making effective decisions that can significantly impact their lives. The survey research results reported here provide important guidelines that should be considered in student surveys in terms of survey length, duration, and frequency of administration.

Respondents also provided clear guidance for future USAFA surveys. During the last 2.5 years, analysis of electronic survey completion times consistently demonstrated that the average

completion time for electronic USAFA surveys ranges from 12 to 13 minutes. The current survey serves as a perfect example: the average completion time was 12.5 minutes. Furthermore, on average, respondents indicated that the optimal completion time for any survey is 13 minutes. In fact, these analyses suggest that developing a USAFA survey that requires more than 13 minutes may be a case of diminishing returns. Based upon current and previous analyses, students appear to place a limit on the time that they are willing to invest. In terms of frequency of administration, the results indicate that the use of sampling should continue and that the number of survey administration should be limited. Perhaps one solution is to restrict survey administrations to specific times in a given year, thus mitigating the perception that too many surveys are administered at USAFA.

Clearly, there are some caveats to consider during survey design and administration. The number of questions is easily confounded by the type of question. Forced-choice questions require less time to answer when compared to a well-developed response to an open-ended question. Respondents can quickly respond to five to six Likert-scaled items per minute. However, open-ended question requires significantly more time (depending upon factors such as complexity of the question, the respondents knowledge and experience with the topic). Pilot testing, knowledge of the student population, and the purpose of the survey should be used to ensure that instruments generally fall within the student-identified parameters described above. If a survey reflects complex constructs such as gender attitudes, social support, and effective leadership, then the students' view of the "optimal" survey typically becomes more difficult to apply.

In terms of the electronic surveys, the results indicate that USAFA is making significant progress toward gaining student trust in the area of data confidentiality. However, significant

and sustained effort is necessary. The fact that seniors tend to distrust the assurance of confidentiality as compared to freshmen indicates that breaches do occur and that the impact is probably cumulative. Hence , efforts to secure and maintain the trust of incoming freshman should be sustained and perhaps intensified through the four years at the Academy. Significant levels of trust can be lost with even a small slip in confidentiality, or more likely, the unfounded rumor that such a breach has occurred.

Regarding the students' motivation underlying survey participation—feeling a "sense of duty" or viewing surveys as "just one more thing that I have to do" appears to be the driving force behind the relatively successful response rates observed at USAFA. However, the goal of enhancing the validity of survey data will only be met through higher response rates, and necessarily, through providing an effective case to students regard the need for and use of survey data. An effective case is based upon, among other things, a clear purpose, effective administration procedures, and timely feedback of the respondents' impact upon decisions that clearly impact students' daily life.

Future research should be conducted to further elucidate the relationship between frequency of survey administration and the factors that combine to impact feeling "over-surveyed," e.g., in what ways does low perceived relevance increase student frustration? To what degree does this frustration impact data validity via decreased participation and reliability? Furthermore, the data indicate that a core set of students may exist who are extremely difficult to engage in the survey research process. This group should be studied more closely in order to better understand their perspectives. In addition, a decision to provide a reward for participation should receive careful study. While many of the younger students eagerly supported this option, the older students clearly described the impact of incentives on data validity.

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